



School of Engineering & Physical Sciences
Department of Electrical and Computer Engineering
(ECE)

CSE 482: Internet and Web Technology

Project Report: Group - 09

Section – 01

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Introduction:

The introduction is about a website where students of NSU will share their ideas, communicate with each other or post their blogs. The website will contain a homepage where students of NSU can post and all posts will be visible, there will be users' accounts and admin's accounts. Users have the authority to edit, delete and share their posts and admins will have the rights to approve user's accounts, blogs, and delete posts if anyone reports about that post. This website will maintain the communication among NSU students. Students will be able to get help from others. The website will maintain all the privacy of users.

This website will help all the students of NSU. It will bring all students in one frame. It will help each and every student of NSU. This website builds good communication among NSU students. This website will ensure security of users.

Background and Product Context:

From the beginning till now, there is always a gap in communication. It doesn't matter whether it is a reputed organization or not. The communication gap has been seen in students. It's a common issue among students. This is the lacking which has been seen frequently in students when they go for job interviews. Communication is key — especially in the workplace, where people need to be on the same page and be working toward the same ultimate bigger-picture goals. Working remotely can bring unique challenges to good communication as well. But, often, this skill is lacking which can lead to a whole host of issues at work.

Communication gap is the reason why students cannot communicate in their work life. Behind the communication gap, platform plays an important role. There is no platform where students can communicate with others. To communicate, students need the right platform to share their ideas, get help from others. In Bangladesh, there is no such a platform where students can communicate. There is a Facebook group where students share their thoughts, posts and communicate, especially in North South University. There are around 60K students in the group but there are so many problems students have to face in student life. As all we know, a larger group means problems in maintaining. Firstly, many important posts are not visible in groups because social media shows the post according to time. As a result, Maximum posts disappear. So students miss important notifications. They face some problems just because of social media maintenance. Secondly, students of NSU cannot share their ideas. It happens because sometimes students feel that they need the right platform where other students can see and give their feedback. Lastly, new students face some difficulties in new places. It is obvious because it is a new place, new environment and full of unknown people. However, they need a platform to get a chance to know about those places. In NSU, fresher get confused in so many things. They cannot get help from others but if they get any platform, it will be helpful for them to adjust in a new place.

Students of NSU need such a right platform to increase their communication skills, get help from others, and post their ideas and thoughts without hesitation. The student blogging website for sharing ideas, posts and communication will increase their communication skills, and bring students in one frame. This website will be the right platform for NSU students. The website will not only help in communication, but also help with other things like non-academic help. The website will be a guide tool for NSU students. Students will get Academic and non-Academic help, career related guidance, and a friendly environment to share their problems. They can give their feedback. If a student has any questions, they will get help from this website. In short, the website will become a community which can bring NSU students in one frame.

User Story:

Use Case 01:

Anika Tabassum (Students of NSU in pharmacy dept). She needs to know about Financial Aid Recipients. She has two options.

- a. Go to a website and search about financial aid recipients which will show her all the posts which have been posted on the website like this semester, previous semesters etc. She will be able to see all the posts and if she needs help from the previous semester. She will get all the help from the website.
- b. She can post on the website and within a few hours, she will get help from students and admin as well. If she needs to edit or delete the post, she will get the freedom to edit the post or delete the post from the website.

Use Case 02:

Farhad Ahmed (Student of NSU in BBA dept.). He needs to know about Ramadan Class timing. He also has two options.

- a. Search the website and get from the post which has been posted in last year Ramadan.
- b. Go to the website and post on the website if he needs to know urgently.

Use Case 03:

Nabila Nur (Student of NSU in ECE dept). She wants to be a research assistant. But she has no idea about research. So, she has also two option

- a. Search on the website and see all the posts which have been posted in previous or semester. She will have some ideas regarding research.
- b. She can post on the website and she can add or delete information if she needs. There will be editing option.

Solution Description:

Architecture diagram:

This diagram illustrates how users can interact with the website and also the interaction between the frontend and backend. Aside from that, it reflects the connection between the web server and the file system and database.

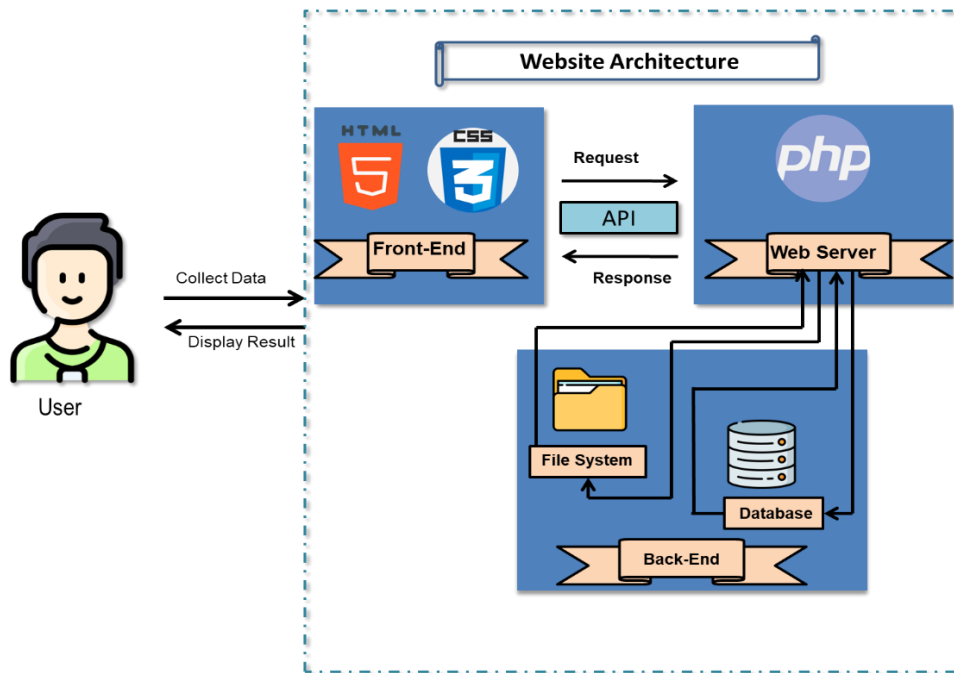


Figure-01: The Architecture Diagram for Blogging website

Front-end Design: To design our blogging website front-end we have used HTML 5, CSS 3, JavaScript and Bootstrap 5 for all the web pages.

Back-end Design: For backend development we have used the latest version of PHP programming language.

Database: As for database we have used MySQL (MariaDB) database.

API: As for API we used CK editor to improve the writtring content.

Front-end Development:

A total of 9 page-templates is designed in front-end.

1. Home page
2. Search result page
3. User profile
4. Threads
5. Register/login page
6. Edit Profile
7. Post Blog
8. Edit/Delete blogs
9. Comments

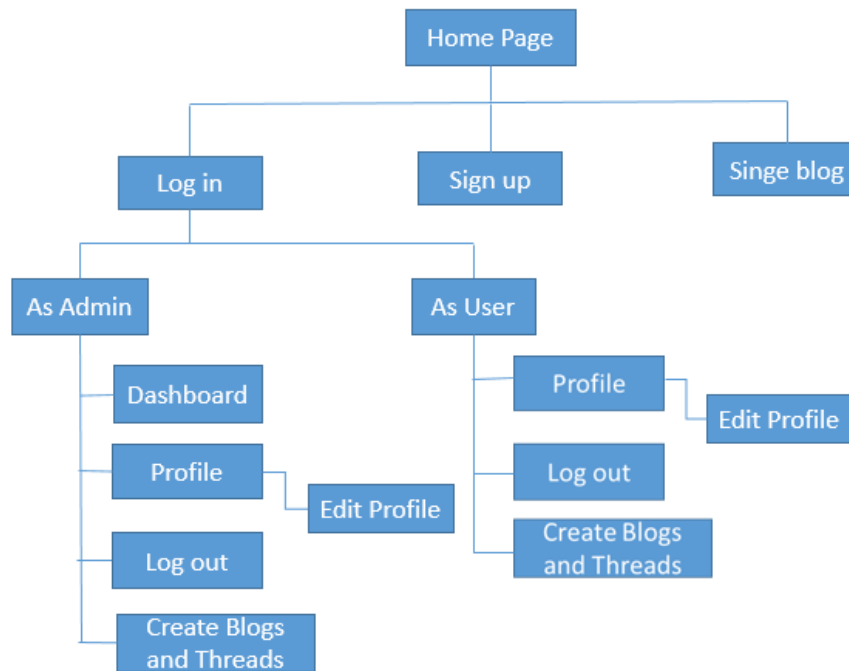


Figure-02: Front-end hierarchy of a Blogging Website

Back-end Development:

A total of 11 page-templates is designed in back-end.

1. Admin dash board
2. Admin profile
3. Users list
4. Add users
5. Blog history
6. Add blogs
7. Threads list
8. Add threads
9. Category list
10. Add category
11. Comment lists

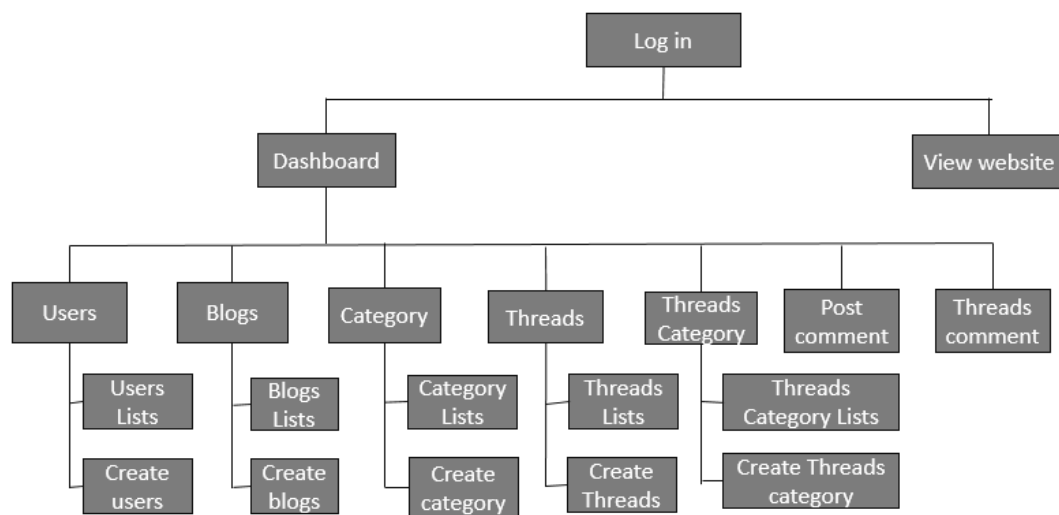


Figure-03: Back-end hierarchy of a Blogging Website

Database:

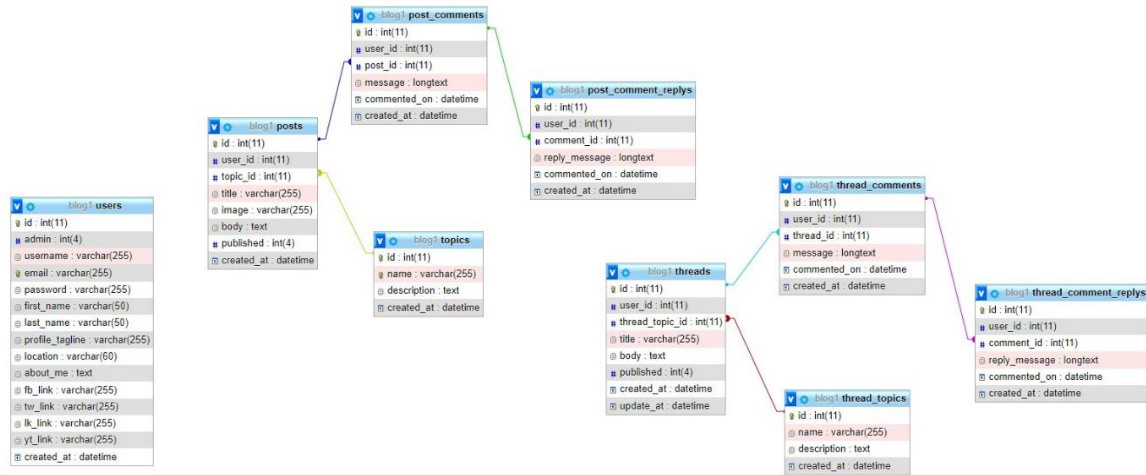


Figure-04: Database Relationship

Development Plan:

Development methodology will adopt the agile methodology. Each cycle will complete in exactly 2 weeks (10 working days).

Checkpoint 1

Duration: We had designed a prototype of how the front end would look like. It took a total of 2 weeks to design the frontend of the website.

Deliverables:

On 20th February 2022, we submitted our project proposal and started developing our website with the design in mind.

Checkpoint 2

In this phase we developed a basic and initial frontend. This phase was the lay foundation of the product. It took 2 weeks to design the front end.

Deliverables:

On 7th March 2022, we delivered our work where the user will receive a fully deployed functional website with acceptable performance and user experience.

Checkpoint 3

In this phase we developed the backend of the website. We developed the database structure and connection to the database.

Deliverables:

On 21st March 2022, we delivered our work where the user will search the destination and other things through the database.

Checkpoint 4

In this phase we worked on connection with APIs and hosting the website on the Internet. It made the website live and accessible from anywhere.

Deliverables:

On 4th April 2022, we delivered our work where the user can access the website from anywhere in the world.

Use Case Diagram:

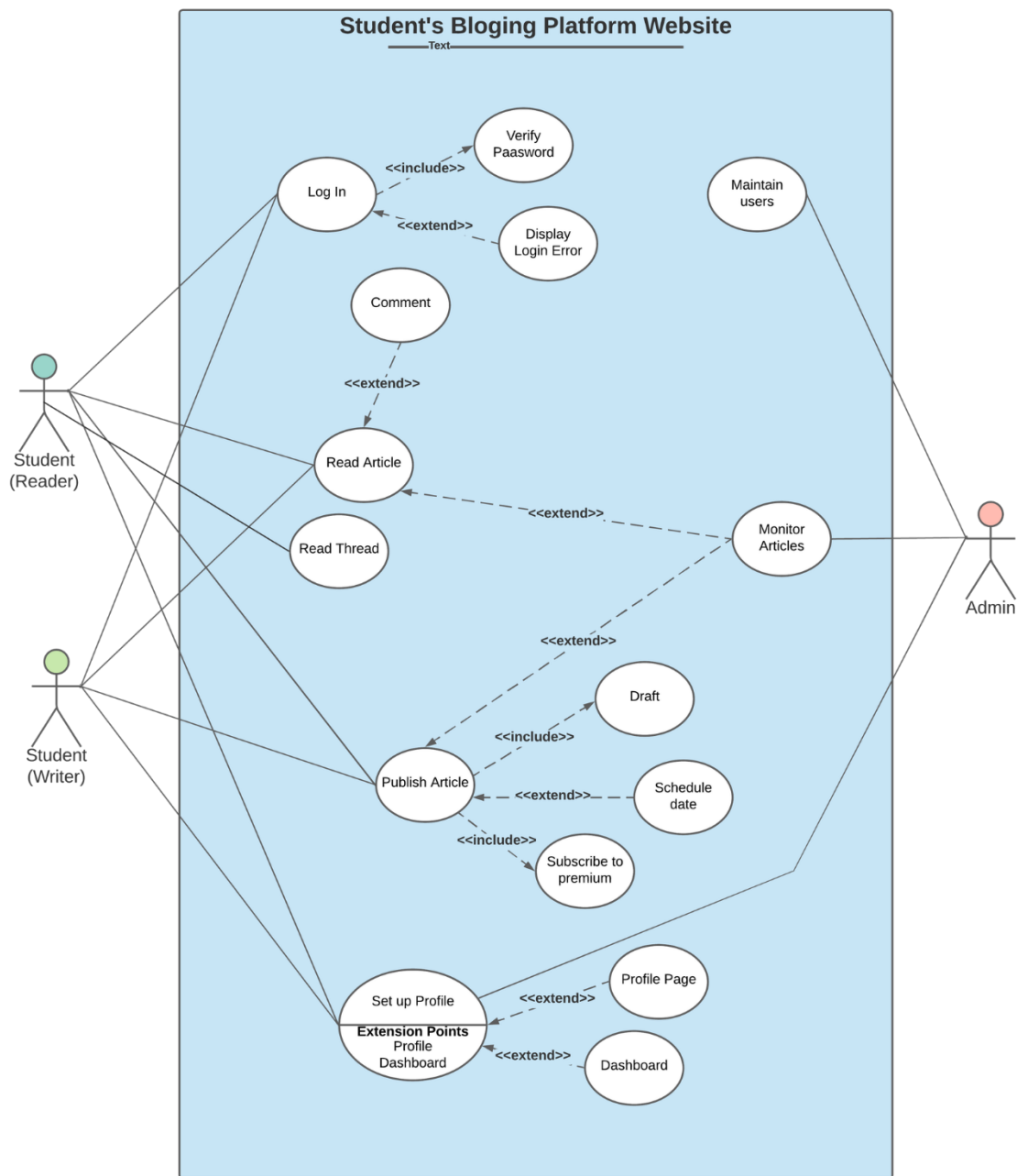


Figure-05: Use Case Diagram of a Blogging Website

Results:

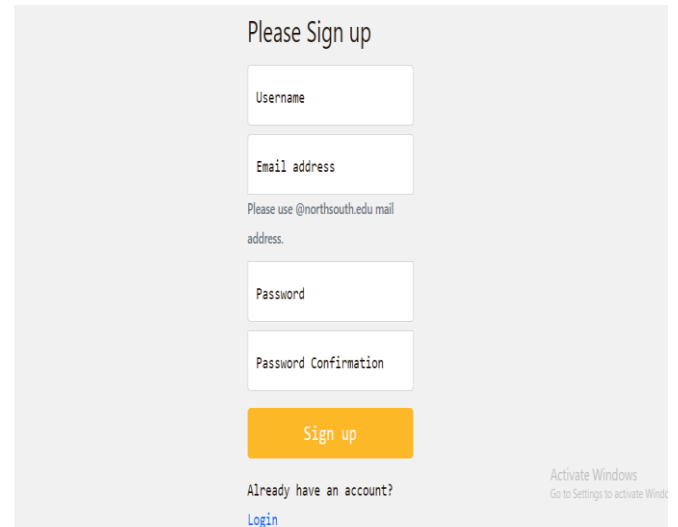
Front-end Design:

At the very beginning, users will view the home page where they can read some of the threads or blogs but cannot write any comments or blogs. Users have to log in or sign up to the system to write blogs or comments.



The login form is titled "Please Sign in" and is located on the "NSUser's Blog" page. It features a header with "Home Sign Up Login" links. The form includes input fields for "Username" and "Password", a yellow "Sign in" button, and a link for "Don't have an account? Sign up". A Windows activation watermark is visible in the bottom right corner.

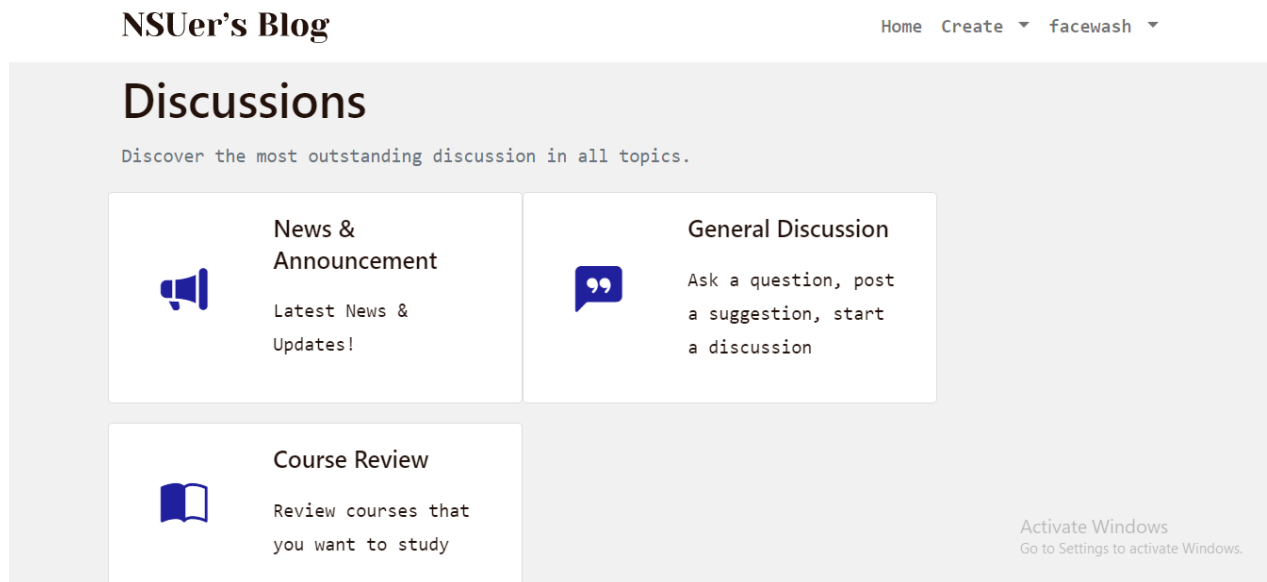
Figure-06: Log in form



The signup form is titled "Please Sign up" and is located on the "NSUser's Blog" page. It features a header with "Home Sign Up Login" links. The form includes input fields for "Username", "Email address", "Password", and "Password Confirmation", a yellow "Sign up" button, and a link for "Already have an account? Login". A note specifies "Please use @northsouth.edu mail address." A Windows activation watermark is visible in the bottom right corner.

Figure-07: Signup form

After logging in successfully, users will view the home page from where users can create blogs and threads or write comments on blogs.



The home page is titled "NSUser's Blog" and features a header with "Home Create" and a user profile "facewash". The main section is titled "Discussions" with the subtitle "Discover the most outstanding discussion in all topics." It contains three discussion categories: "News & Announcement" (Latest News & Updates!), "General Discussion" (Ask a question, post a suggestion, start a discussion), and "Course Review" (Review courses that you want to study). A Windows activation watermark is visible in the bottom right corner.

Figure-08.1: Home Page

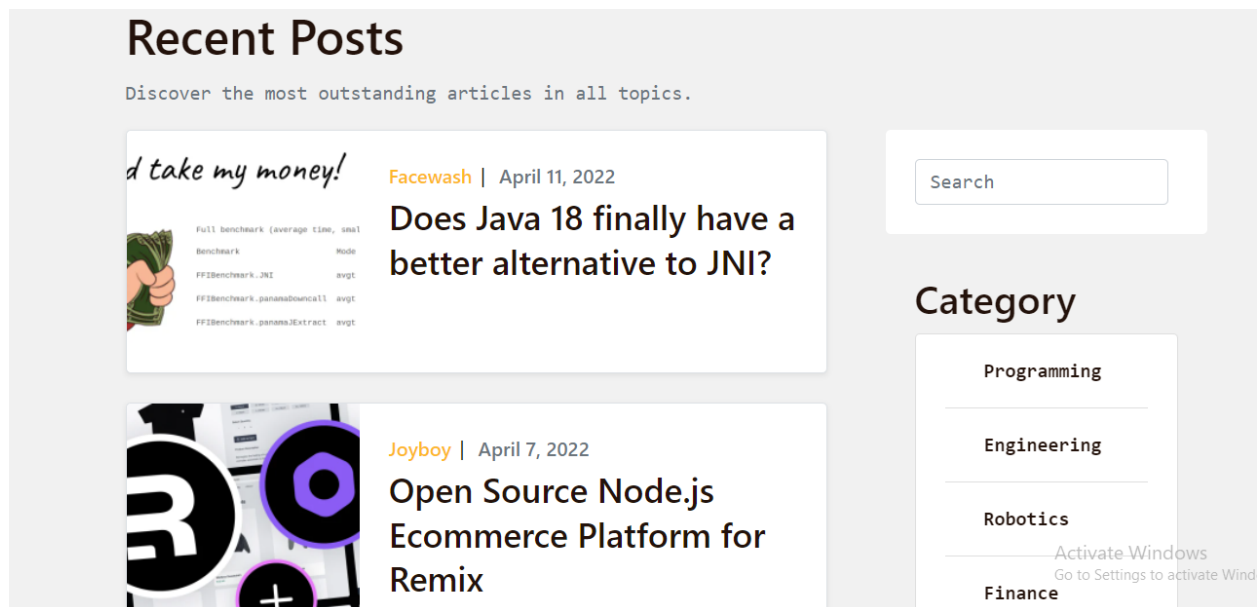
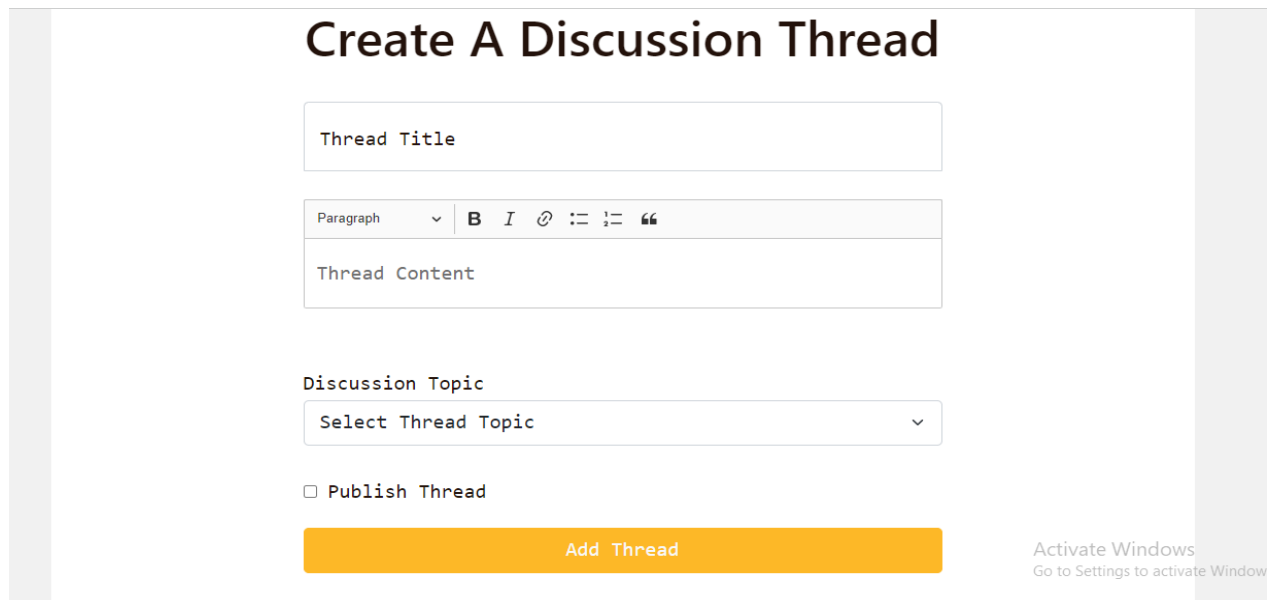


Figure-08.2: Home Page - II



Figure-08.3: Home Page – III

To write any blogs or threads, users have to fill out a form, write their blogs in it, then make it publish and add it. After that, the blog or thread will be visible on the home page.



The image shows a web form titled "Create A Discussion Thread". It includes a text input for "Thread Title", a rich text editor for "Thread Content" with a dropdown menu set to "Paragraph" and various formatting icons (bold, italic, link, list, link, quote), and a dropdown menu for "Discussion Topic" with the placeholder "Select Thread Topic". Below these is a checkbox labeled "Publish Thread". At the bottom is a large orange button labeled "Add Thread". On the right side of the form, there is a watermark that says "Activate Windows Go to Settings to activate Windows".

Figure-09: Create threads form.

Users can view his profile and update their profile if needed.



The image shows a user profile page for "Face Wash". The header includes "NSUser's Blog" on the left and navigation links "Home", "Create", and "facewash" on the right. The profile section features the name "Face Wash" in large bold text, the handle "@facewash", and the bio "No#1 Facewash in the world". Below the bio, it shows the location "Bangladesh" and the date "Joined March 20, 2022". At the bottom are icons for Facebook, Twitter, LinkedIn, and YouTube. On the right side of the profile section is an orange button labeled "Edit Profile".

Figure-10.1: User profile page.

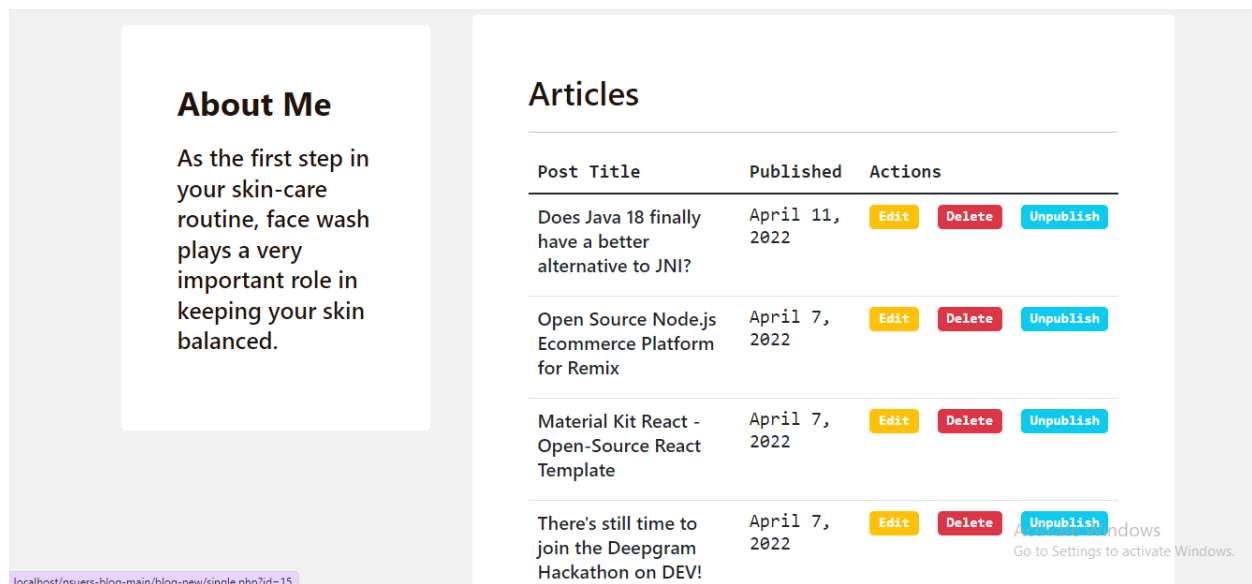


Figure-10.2: User profile page.

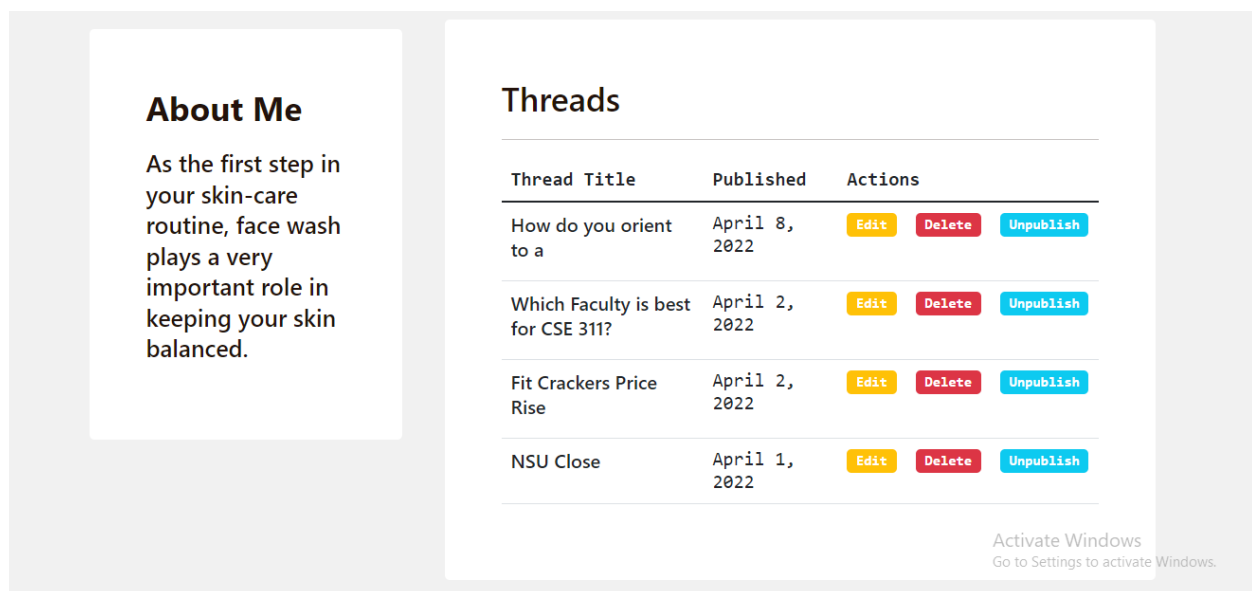


Figure-10.3: User profile page.

Edit Profile

First Name
face

Last Name
wash

Email address
facewash@gmail.com

Profile Tagline
No#1 Facewash in the world

Location
Bangladesh

About Me
As the first step in your skin-care routine, face wash plays a very important role in keeping your skin

Facebook
https://www.facebook.com/facewash

LinkedIn
https://www.linkedin.com/facewash

Twitter
https://twitter.com/facewash

Youtube
https://www.youtube.com/facewash

Update Profile

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NSUer's Blog

Activate Windows
Go to Settings to activate Windows.

Figure-11: Edit user profile page.

Clicking on every blog name will take the user to a single blog page from where the complete blog can be viewed and users can comment on the blog from there.



Figure-12.1: Single blog page

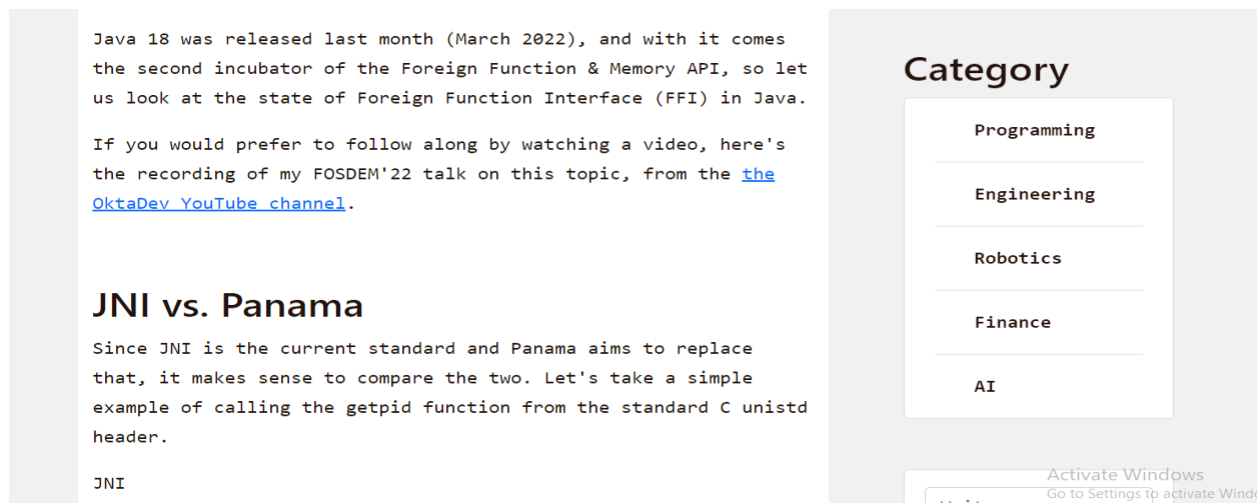


Figure-12.2: Single blog page



Figure-12.3: Single blog page

Back-end Design:

If the user is an admin, then after login the first visible page will be the admin dashboard. From the dashboard, the user can view the main website, post blogs or threads, add users, blogs category, and also can view users list and comments.

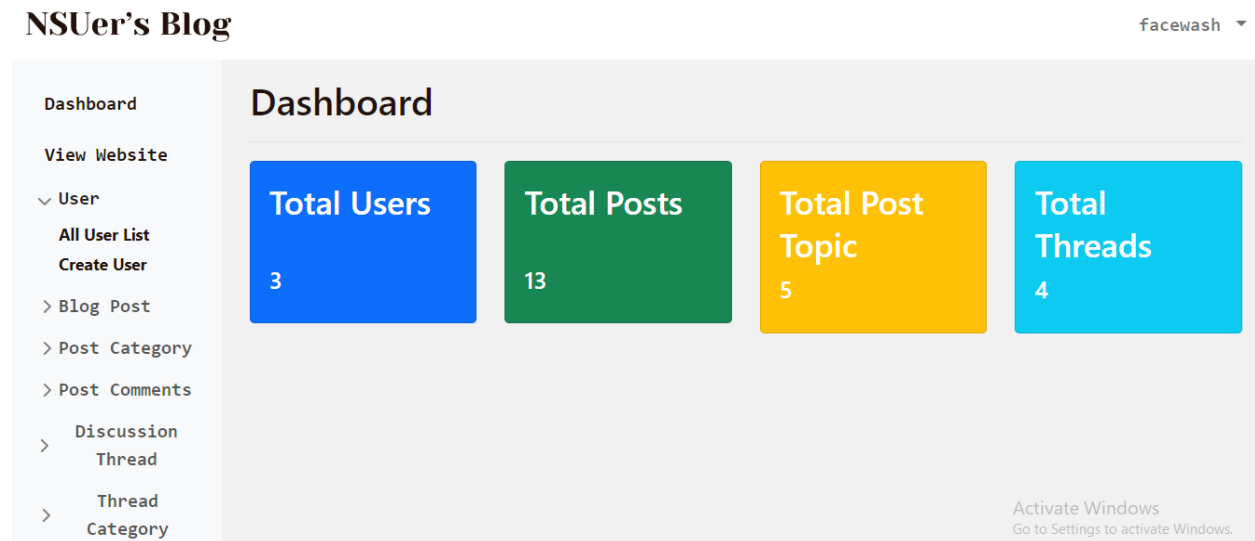


Figure-13: Admin dashboard

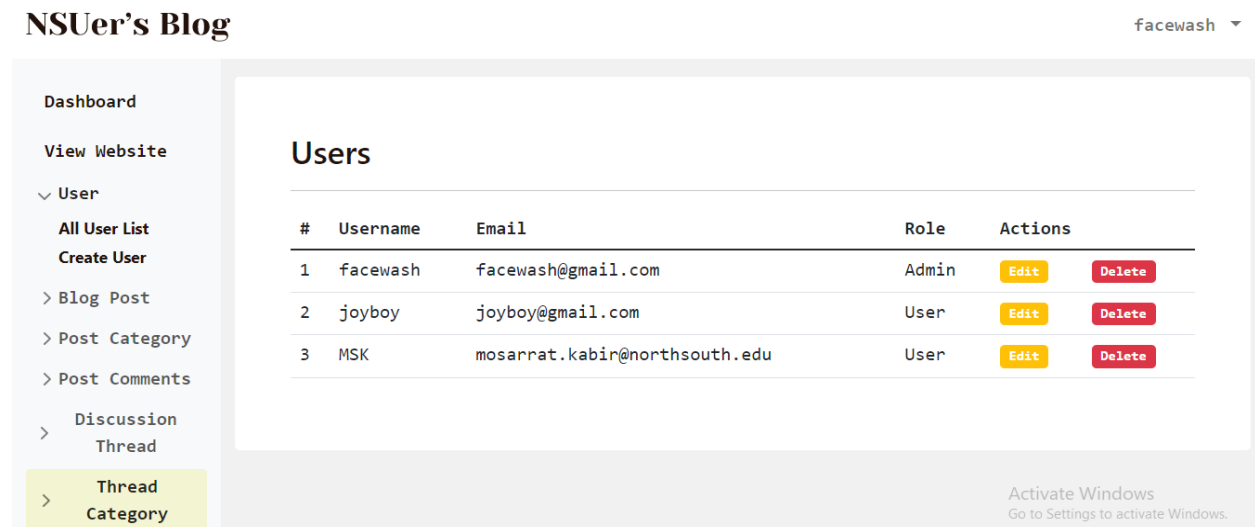


Figure-14: Users list

View Website		Post Comments			
User					
All User List					
Create User					
Blog Post					
Post Category					
Post Comments					
Discussion Thread					
Thread Category					
Thread Comments					

#	Post Title	Comment	Author	Actions
1	PHP The Right Way	nice post...	Facewash	Delete
2	PHP The Right Way	The living document...	Joyboy	Delete
3	Introducing ApiHome: Home of API Testing	The Open API...	Joyboy	Delete
4	Hiring an Engineer: 7 Different Types of Engineering Interviews	The first is the take-home coding interview...	Joyboy	Delete
5	How to Operate Promotional Robots with Minimal Technical Knowledge	There are two ways to set up and activate your robot...	Joyboy	Delete
6	Developing AI Web Applications in Python	Artificial Intelligence (AI) has long been an essential...	Facewash	Delete

Figure-15: Comment list

View Website
User
All User List
Create User
Blog Post
Post Category
Post Comments
Discussion Thread
Thread Category
Thread Comments

Create A User

User Name

Email address

Please use @northsouth.edu mail address.

Password

Password Confirmation

☒ Admin

Add User

Figure-16: Create users form

Dashboard
View Website
User
All User List
Create User
Blog Post
Post Category
Post Comments
Discussion
Thread
Thread
Category
Thread
Comments

Create A Blog Post

Post Title

Post Cover Photo

Choose File
No file chosen

Paragraph
B I

Category

Category
Select topic

Publish Post

Add Post

Figure-17: Create blog form

phpMyAdmin

Server: 127.0.0.1:3307 Database: blog

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> posts	Browse Structure Search Insert Empty Drop	13	InnoDB	utf8mb4_general_ci	88.0 K1B	-
<input type="checkbox"/> post_comments	Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_general_ci	16.0 K1B	-
<input type="checkbox"/> post_comment_replies	Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_general_ci	16.0 K1B	-
<input type="checkbox"/> threads	Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	32.0 K1B	-
<input type="checkbox"/> thread_comments	Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	32.0 K1B	-
<input type="checkbox"/> thread_comment_replies	Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_general_ci	16.0 K1B	-
<input type="checkbox"/> thread_topics	Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	16.0 K1B	-
<input type="checkbox"/> topics	Browse Structure Search Insert Empty Drop	5	InnoDB	utf8mb4_general_ci	32.0 K1B	-
<input type="checkbox"/> users	Browse Structure Search Insert Empty Drop	3	InnoDB	utf8mb4_general_ci	32.0 K1B	-
9 tables	Sum	43	InnoDB	utf8mb4_general_ci	272.0 K1B	0 B

☐ Check all
 With selected:

Print Data dictionary

Figure-18: Database for NSUser's-blog Website.

Reference:

- <https://www.w3schools.com/html/>
- <https://www.youtube.com/watch?v=MDLn5-zSQI&t=142s>
- <https://www.youtube.com/watch?v=hx38tnlYGIA>
- <https://www.youtube.com/watch?v=5MmEUWfuZFk&t=180s>